

FIG. 1A (PRIOR ART)

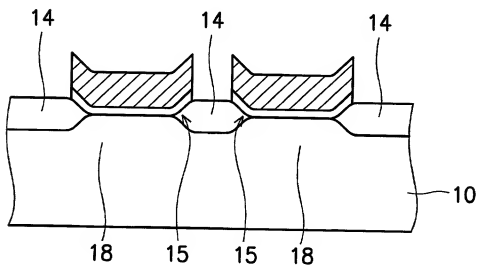


FIG. 1B (PRIOR ART)

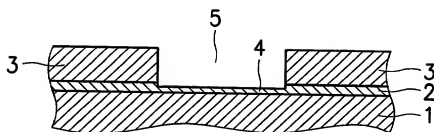


FIG. 2A (PRIOR ART)

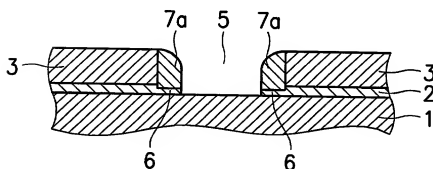


FIG. 2B (PRIOR ART)

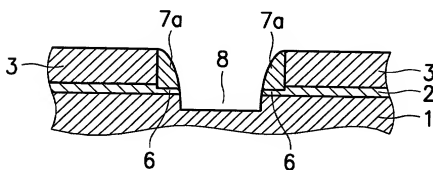


FIG. 2C (PRIOR ART)

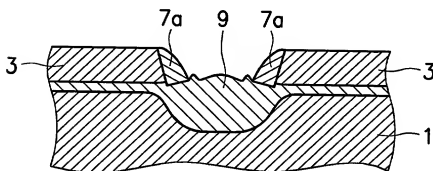


FIG. 2D (PRIOR ART)

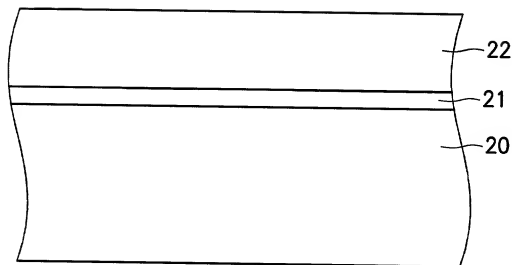


FIG. 3A

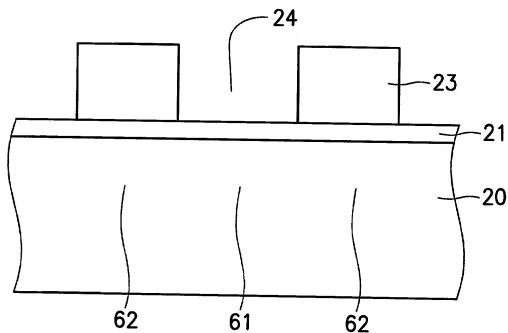


FIG. 3B

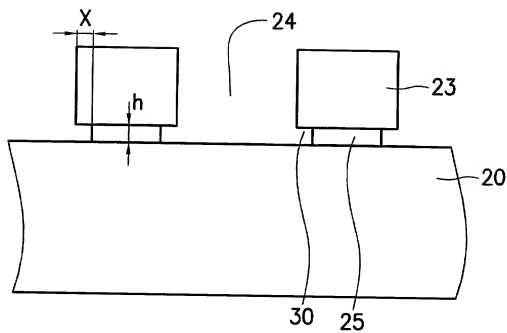


FIG. 3C

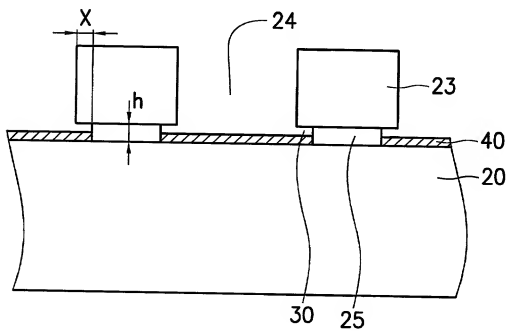


FIG. 3D

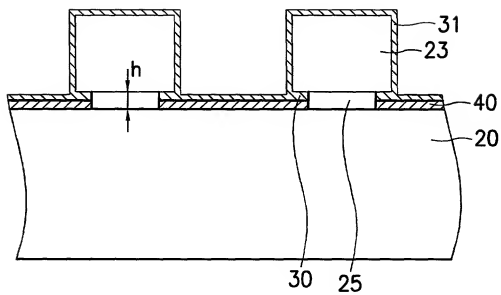


FIG. 3E

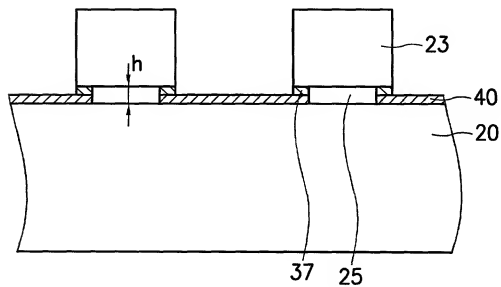


FIG. 3F

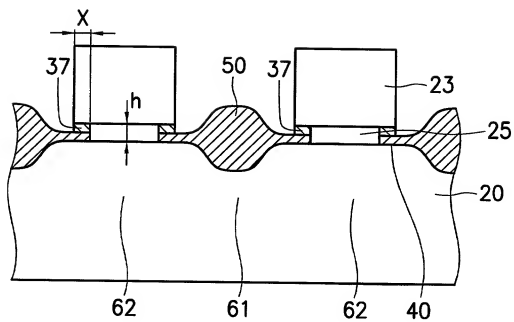


FIG. 3G

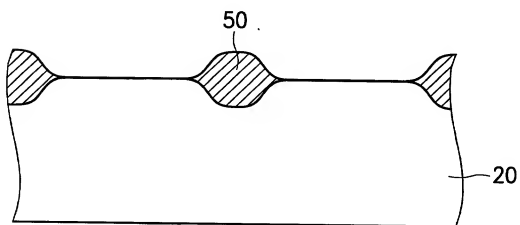


FIG. 3H

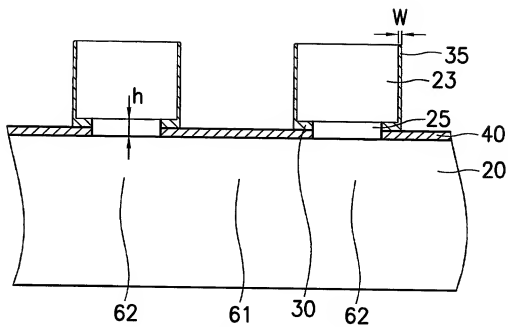


FIG. 4A

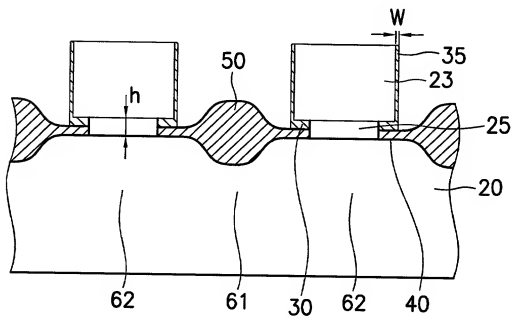
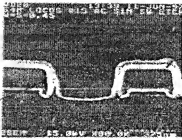


FIG. 4B

此为未覆 Fox 之前的 SEM 照片, 主要是看出 layer 3.5 的厚度怎样

层的
layer.



RECESSED LOCOS SCHEME
(BEFORE FIELD OXIDATION)

此为 poly

poly over layer was used for SEM chemical etching treatment
证明所形成的 sidewall (layer 3.5) 很薄.

fig 5A (process SEM cross-section)

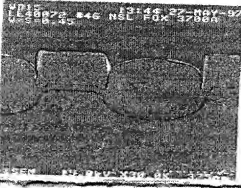


fig 5B (process SEM cross-section)

由 fig 5B 可看出完全没有 bird's beak encumbrance (BBE).

(按 0.3um 64M DRAM).

⇒ 此为覆 Fox 之后的 SEM 图.



field oxide.

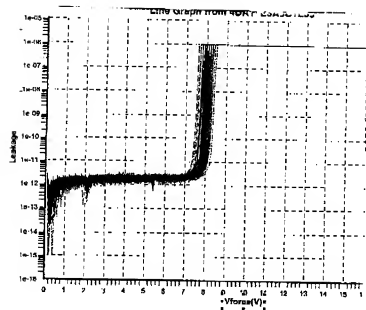
fig 5C.

active area.

(process SEM cross-section)

由 fig 5C 的 SEM 照片, 可看出最外层没有 field oxide 的脖子, 也证明没有 BBE, 同时看出没有 field on 也够厚, 没有 thinning effect.

⇒ 和 fig 5B 相同, 只是扫描角上体图.

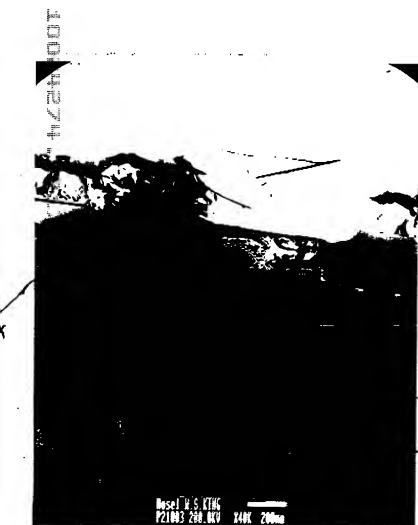


從fig 5D可看出

well junction measurement results
show that no silicon defect was induced by
isolation process.

⇒ 電信測量圖 (做完 isolation process 後測得)。

fig 5D. (electrical monitoring)



得知沒有長 2nd pad oxide (40) 時 substrate
遇到較高 stress 被 ~~破壞~~ 破壞。TEH 中

TEH shows severe silicon defect induced
by high stress.

defect.

substrate.

fig 5E.